

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-27 (Cancelled)

28. (New) Use of an 11- β -HSD-type 1 and/or type 2 inhibitor or a pharmaceutically acceptable salt thereof, for the manufacture of a pharmaceutical agent for the prevention and/or treatment of inflammation-induced and/or immune-mediated loss of bone and/or cartilage, wherein said use is for the prevention and/or treatment of osteoporosis, postmenopausal osteoporosis, arthritis, juvenile chronic arthritis and/or adjuvant arthritis, infectious diseases, bone loss by HIV, tooth loss, bone marrow inflammation, synovial inflammation, cartilage and/or bone erosion and/or proteoglycan damage.

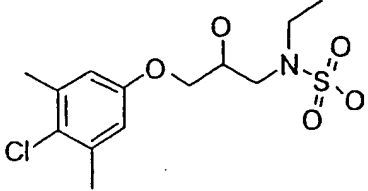
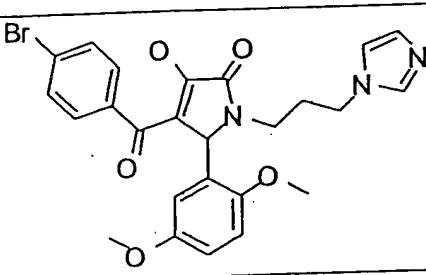
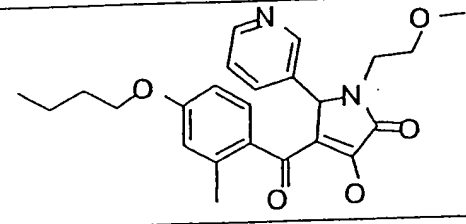
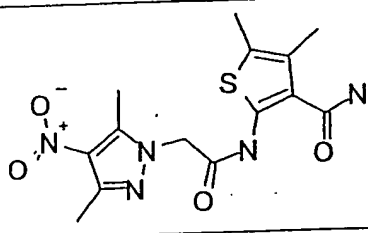
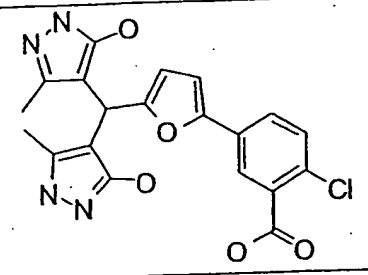
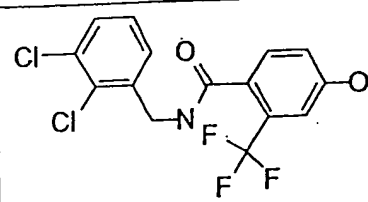
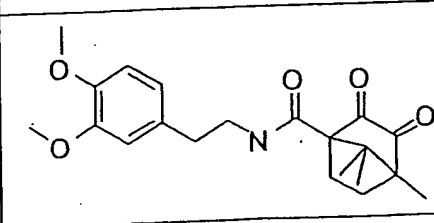
29. (New) The use according to claim 28 for the prevention and/or treatment of inflammation-induced and/or immune-mediated loss of bone and/or cartilage in a mammal.

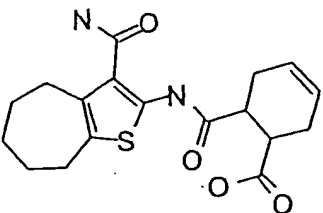
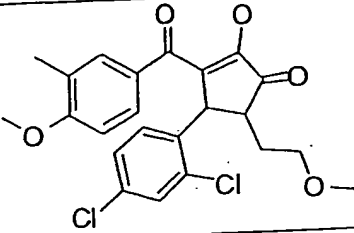
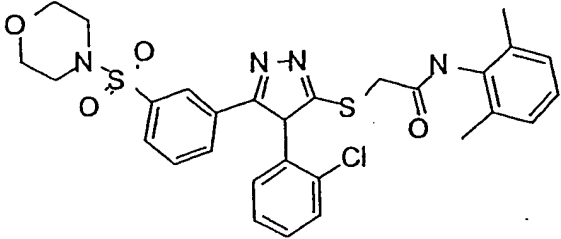
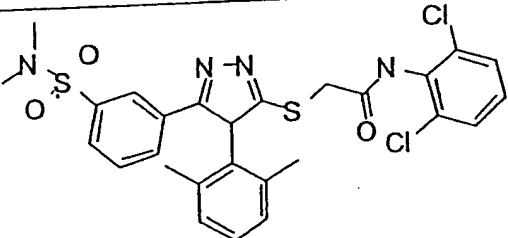
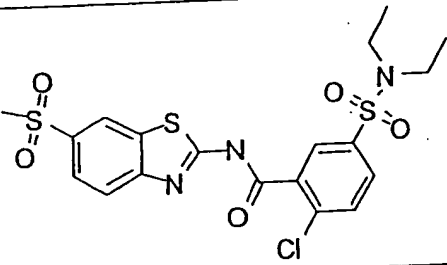
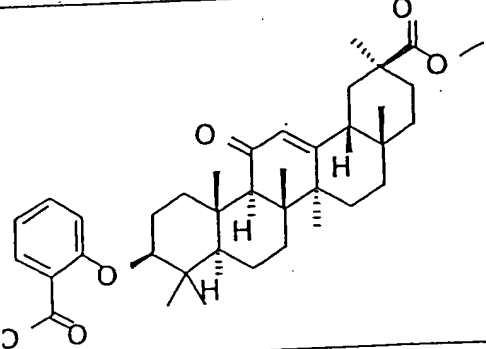
30. (New) The use according to claim 29, wherein the mammal is a human.

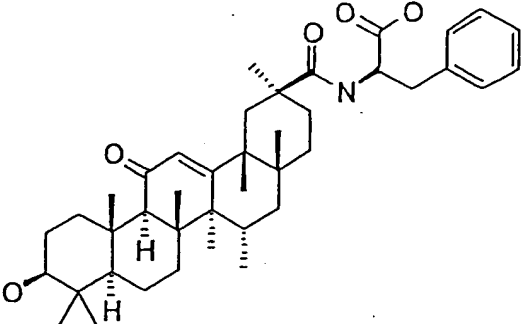
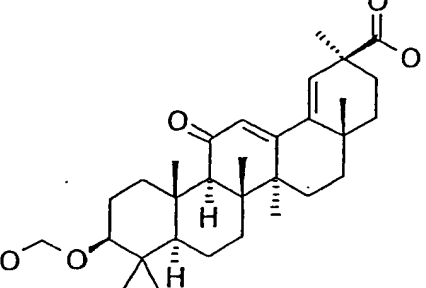
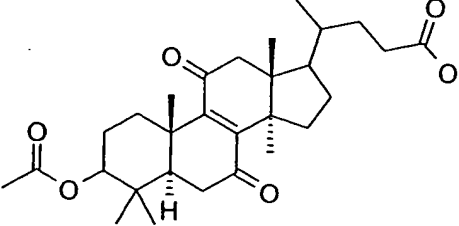
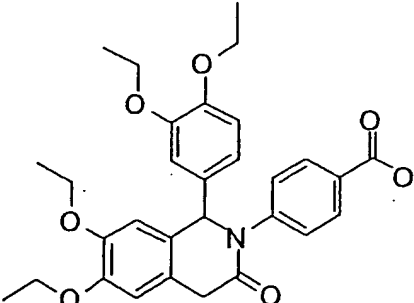
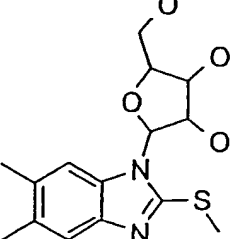
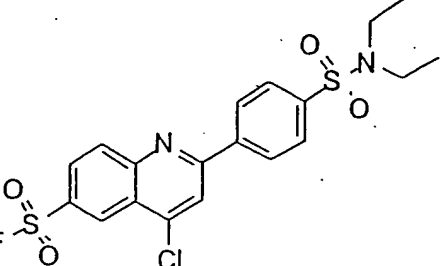
31. (New) The use according to claim 28, wherein said use is for the prevention and/or treatment of periodontitis and/or arthritis selected from the group consisting of osteoarthritis and/or rheumatoid arthritis.

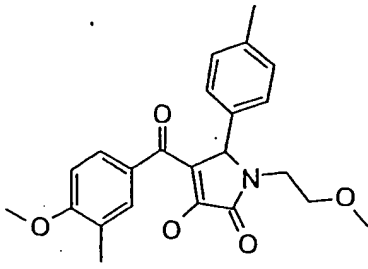
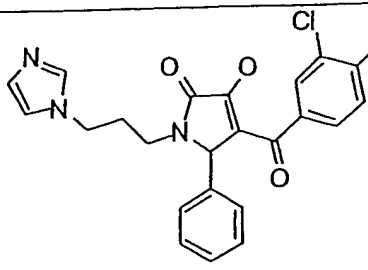
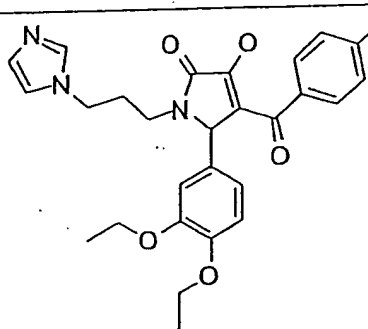
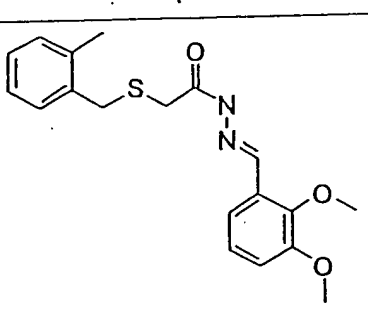
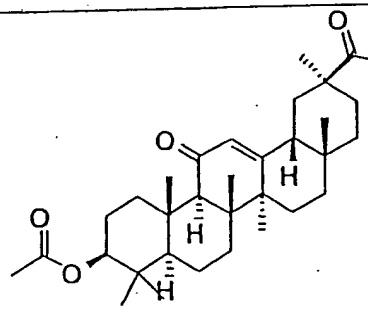
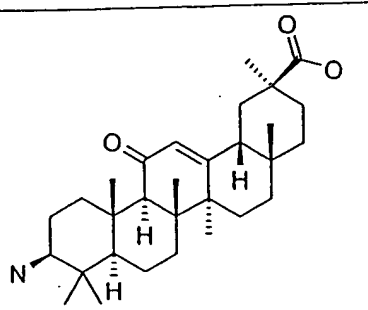
32. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is 18-p-glycyrrhetic acid.

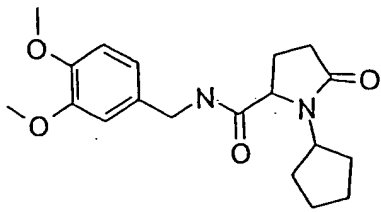
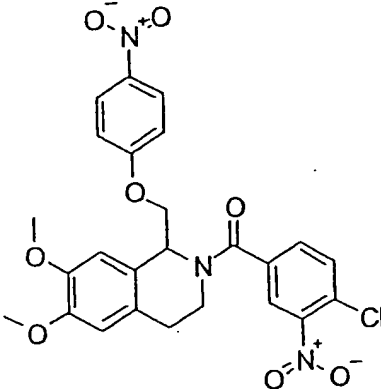
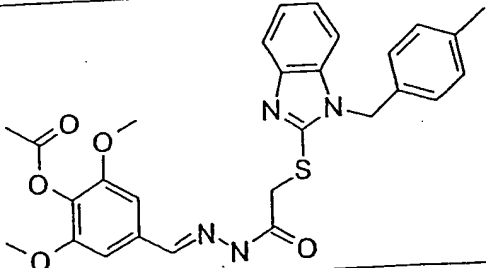
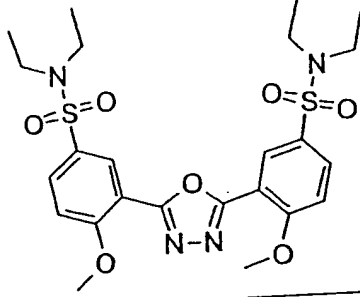
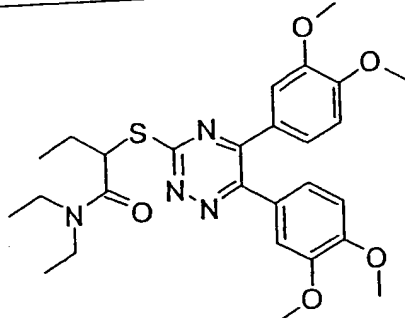
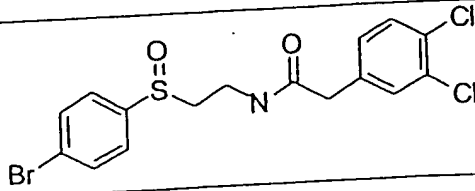
33. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is selected from the group consisting of the following formulas:

Compound Name	Structure
Formula 1	
Formula 2	
Formula 3	
Formula 4	
Formula 5	
Formula 6	
Formula 7	

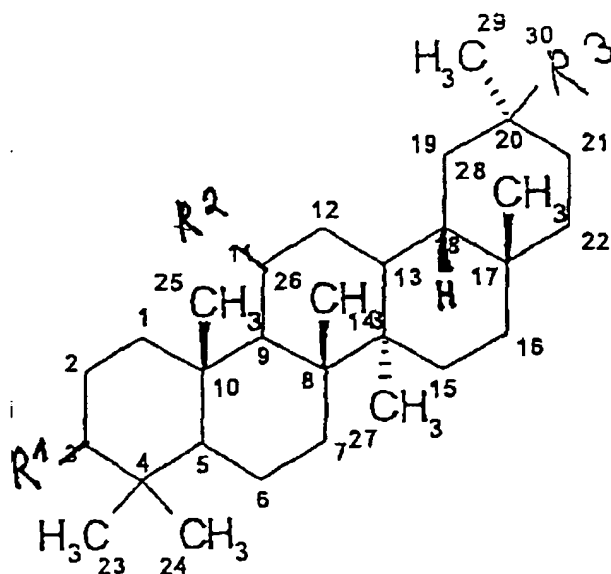
Formula 8	
Formula 9	
Formula 10	
Formula 11	
Formula 12	
Formula 13	

Formula 14	
Formula 15	
Formula 16	
Formula 17	
Formula 18	
Formula 19	

Formula 20	
Formula 21	
Formula 22	
Formula 23	
Formula 24	
Formula 25	

Formula 26	
Formula 27	
Formula 28	
Formula 29	
Formula 30	
Formula 31	

34. (New) The use according to any claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor has the structure of formula I:



formula I

wherein R' is

a hydrogen,

a linear or branched C₁-C₄ alkyl group,

a linear or branched C₁-C₄ alkenyl group,

a linear or branched C₁-C₄ alkynyl group,

an ester, amino, halo, hydroxy, carbonyl, carboxy, carboxyphenoxy, C₁-C₄ alkoxy, C₁-C₄ alkoxy carbonyl, C₁-C₄ alkyl amino, di-(C₁-C₄-alkyl)amino, cyano, carboxy amide,

carboxy-(C₁-C₄-alkyl)amino, carboxy-di(C₁-C₄-alkyl)sulfo, sulfido (C₁-C₄-alkyl),

sulfoxido (C₁-C₄-alkyl), sulfono (C₁-C₄-aminoalkyl) or thio group, a saturated or

unsaturated, aromatic or heteroaromatic mono- or polycyclic group,

wherein said cyclic group may be mono- or polysubstituted with an ester, amino, halo, hydroxy, C1-C4 alkoxy, carboxy, carbonyl, C1-C4 alkoxy carbonyl, carboxyphenoxy, C1-C4 alkyl amino, di-(C,-C4-alkyl)amino, cyano, carboxy amide, carboxy-(C,-C4-alkyl)amino, carboxy-di(C,-C4-alkyl)amino, sulfo, sulfido (C,-C4-alkyl), sulfoxido (C1-C4-alkyl), sulfono (C,-C4-alkyl), thio, C1-C4 alkyl, C2-C4 alkenyl or C2-C4 alkynyl group;

R2 is

a hydrogen, C1-C4 alkyl, carbonyl, ester, amino, halo, carbonyl, hydroxy, carboxy, carboxyphenoxy, C1-C4 alkoxy, C1-C4 alkoxy carbonyl, C1-C4 alkyl amino, di-(C,-C4-alkyl)amino, cyano, carboxy amide, carboxy-(C,-C4-alkyl) amino, carboxy-di(C,-Ca-alkyl), sulfo, sulfido (C1-Ca-alkyl), sulfoxido (C,-Ca-alkyl), sulfono (C1-Ca-alkyl) or thio group;

R3 is

a hydrogen,

a linear or branched C,-C,o alkyl group,

a linear or branched C,-C,o alkenyl group,

a linear or branched C,-C,o alkynyl group,

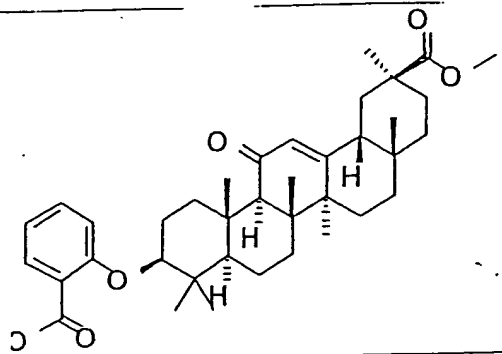
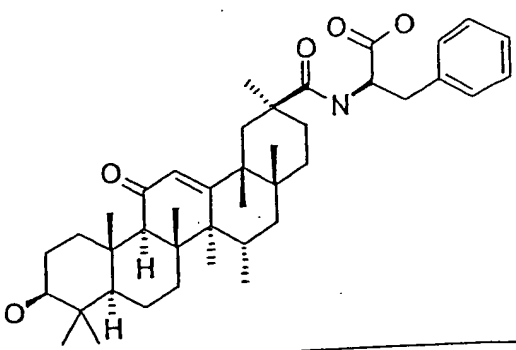
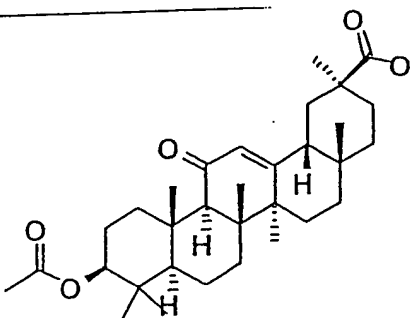
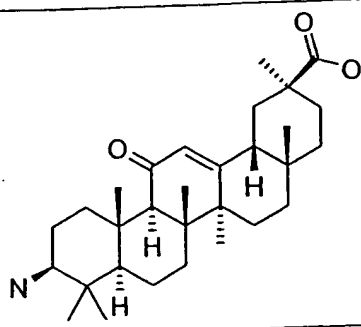
an ester, amino, halo, hydroxy, carbonyl, carboxy, carboxyphenoxy, C,-Ca alkoxy, C1-C4 alkoxy carbonyl, C1-C4 alkyl amino, di-(C,-Ca-alkyl)amino, cyano, carboxy amide, carboxy-(C,-Ca-alkyl)amino, carboxy-di(C,-Caalkyl)sulfo, sulfido (C1-Ca-alkyl), sulfoxido (C1-Ca-alkyl), sulfono (C1-C4-aminoalkyl) or thio group, a saturated or unsaturated, aromatic or heteroaromatic mono- or polycyclic group;

wherein the chemical bond from carbon 13 to 14 is saturated or unsaturated;

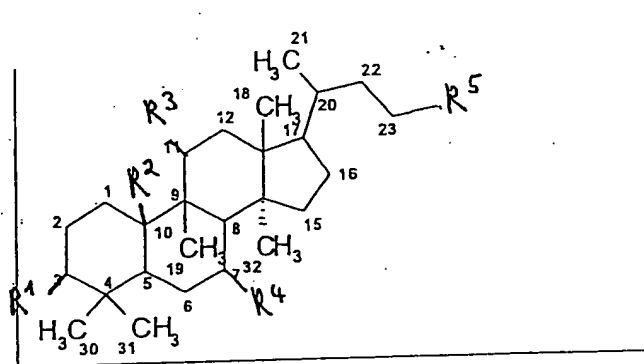
or a salt or derivative thereof in the form of an individual enantiomer, diastereomer or a

mixture thereof.

35. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is selected from the group consisting of the following formulas:

Formula 13	
Formula 14	
Formula 24	
Formula 25	

36. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor has the structure of formula II:



formula II

wherein R' is

a hydrogen,

a linear or branched C1-C10 alkyl group,

a linear or branched C1-C10 alkenyl group,

a linear or branched C1-C10 alkynyl group,

an ester, amino, halo, hydroxy, carbonyl, carboxy, carboxyphenoxy, C1-C4 alkoxy, C1-

C4 alkoxy carbonyl, C1-C4 alkyl amino, di-(C1-C4-alkyl)amino, cyano, carboxy amide,

carboxy-(C1-C4-alkyl)amino, carboxy-di(C1-C4-alkyl)sulfo, sulfido (C1-C4-alkyl),

sulfoxido (C1-C4-alkyl), sulfono (C1-C4-aminoalkyl), thio group, a saturated or unsaturated, aromatic or heteroaromatic mono- or polycyclic group, wherein said cyclic group may be mono- or polysubstituted with an ester, amino, halo, hydroxy, C1-C4 alkoxy, carbonyl, carboxy, C1-C4 alkoxy carbonyl, carboxyphenoxy, C1-C4 alkyl amino, di-(C1-C4-alkyl)amino, cyano, carboxy amide, carboxy-(C1-C4-alkyl)amino, carboxy-di(C1-C4-alkyl)amino, sulfo, sulfido (C1-C4-alkyl), sulfoxido (C1-C4-alkyl), sulfono (C1-C4-alkyl), thio, C1-C4 alkyl, C2-C4 alkenyl or C2-C4 alkynyl group;

R2 is a hydrogen or C1-C4 alkyl,

R3 and R4 are each selected from

a hydrogen

a linear or branched C1-C10 alkyl group,

a linear or branched C1-C10 alkenyl group,

a linear or branched C1-C10 alkynyl group,

an ester, amino, halo, hydroxy, carbonyl, carboxy, carboxyphenoxy, C1-C4 alkoxy, C1-C4 alkoxy carbonyl, C1-C4 alkyl amino, di-(C1-C4-alkyl)amino, cyano, carboxy amide, carboxy-(C1-C4-alkyl)amino, carboxy-di(C1-C4-alkyl)sulfo, sulfido (C1-C4-alkyl), sulfoxido (C1-C4-alkyl), sulfono (C1-C4-aminoalkyl), thio group, a saturated or unsaturated, aromatic or heteroaromatic mono- or polycyclic group;

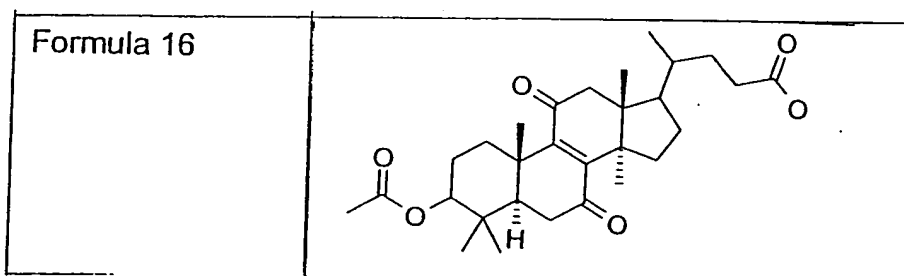
R5 is a hydrogen, C1-C4 alkyl, carbonyl, ester, amino, halo, hydroxy, carboxy, carboxyphenoxy, C1-C4 alkoxy, C1-C4 alkoxy carbonyl, C1-C4 alkyl amino, di-(C1-C4-alkyl)amino, cyano, carboxy amide, carboxy-(C1-C4-alkyl) amino, carboxy-di(C1-C4-alkyl), sulfo, sulfido (C1-C4-alkyl), sulfoxido (C1-C4-alkyl), sulfono (C1-C4-alkyl) or thio

group,

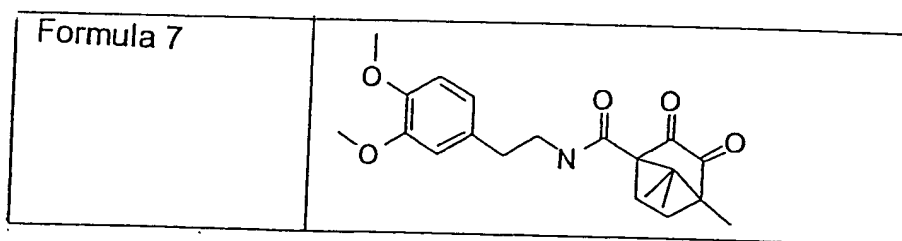
wherein the chemical bond from carbon 8 to 9 is saturated or unsaturated; wherein the chemical bond from carbon 13 to 14 is saturated or unsaturated;

or a salt or derivative thereof in the form of an individual enantiomer, diastereomer or a mixture thereof.

37. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is:



38. (New) The use according to claim 33, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is:



39. (New) The use of claim 28, wherein the pharmaceutical agent comprises at least one 11- β -HSD-type 1 and/or type 2 inhibitor in combination with at least one active ingredient being effective in the prevention and/or treatment of inflammation-induced and/or immune-mediated loss of bone and/or cartilage.

40. (New) The use according to claim 28, wherein the pharmaceutical agent is administered in a dose of 5 to 100 mg/kg body weight per day.

41. (New) The use of claim 28, wherein the pharmaceutical agent is administered orally, sublingually, intravenously, intramuscularly, intraarticularly, intraarterially, intramedullarily, intrathecally, intraventricularly, intraocularly, intracerebrally, intracranially, respiratorally, intratracheally, nasopharyngeally, transdermally, intradermally, subcutaneously, intraperitoneally, intranasally, enterally, topically, via rectal means, via infusion and/or via implant.

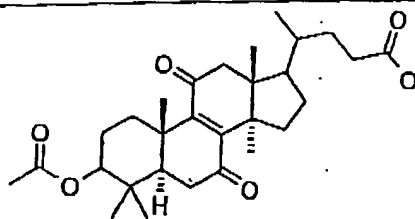
42. (New) The use according to claim 41, wherein the pharmaceutical agent is administered orally.

43. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is glycyrrhetic acid or a derivative thereof such as glycyrrhizin, glycyrrhizinic acid or carbenoxolone.

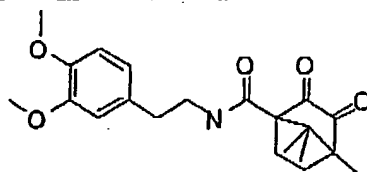
44. (New) The use according to claim 28, wherein the 11- β -HSD-type 1 and/or type 2 inhibitor is 11- α -OH-progesterone or 11- β -OH-progesterone.

45. (New) Pharmaceutical composition comprising, as an active ingredient, an 11- β -HSD-type 1 and/or type 2 inhibitor or a salt thereof, wherein said 11- β -HSD-type 1 and/or type 2 inhibitor is selected from the group consisting of ' the following formulas 16, 7, 13, 14, 25 and 24.

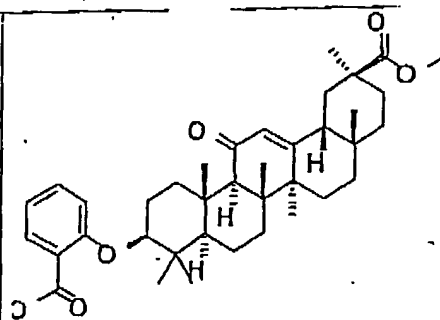
Formula 16



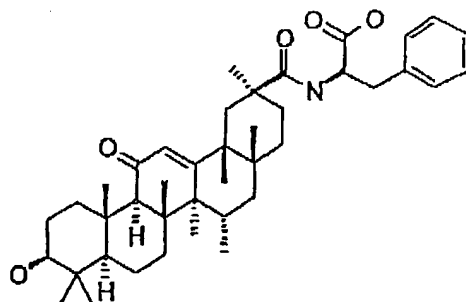
Formula 7



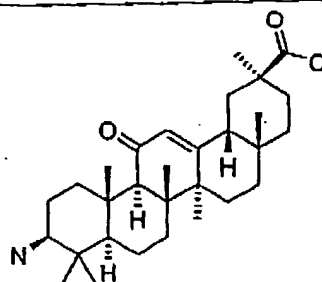
Formula 13



Formula 14



Formula 25



Formula 24

